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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,347

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Makoto Yamada

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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP

901 NEW YORK AVENUE, NW  
WASHINGTON, DC 20001-4413

EXAMINER

TOPGYAL, GELEK W

ART UNIT

PAPER NUMBER

2621

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,347	<b>Applicant(s)</b> YAMADA ET AL.	
	<b>Examiner</b> GELEK TOPGYAL	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                       |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed May 26, 2007 and December 12, 2008 are not considered by the examiner for the reason that the references cited are repeated in the IDS that was filed 5/5/2006. The IDS filed 5/5/2006 has been considered and a copy of the annotated IDS is signed and dated with this instant Office Action.

Furthermore, the IDS filed 10/13/2009 has been considered by the examiner.

### ***Claim Rejections - 35 USC § 112***

2. **Claims 11 and 18** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In re page 3 of the last Office Action, it suggested the applicants amend the claim to embody the program on a "computer readable medium" or equivalent commensurate with its disclosure. The claimed "computer readable medium" is not supported by the instant disclosure.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Claims that recite nothing but the physical characteristics of a form or energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are

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nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of four statutory classes of 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

**Claims 11 and 18** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 11 and 18 defines a medium embodying functional descriptive material. Second to last paragraph of the instant specification defines that the program maybe installed through a wireless communication medium, and hence claims a signal.

Furthermore, **claims 11 and 18** are also rejected under 35 U.S.C. 101 because in the state of the art, transitory signals are commonplace as a medium for transmitting computer instruction and thus, in the absence of any evidence to the contrary and give the broadest reasonable interpretation, the scope of a "computer readable medium"/"recording medium" covers a signal per se.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-3 and 5-18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-3, 5-7, 9-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunji et al. (US 2002/0126994) and Nakajima (US 2003/0228133).

**Regarding claims 1 and 9-11**, Gunji et al. teaches a recording apparatus comprising:

extraction means for extracting an image from a unit in which a moving image is encoded (paragraphs 0107-0108 teaches wherein a thumbnail is generated from a top picture), the unit including a constant number of images (paragraphs 0053-0054 and 0079-0081 teaches of GOPs that have constant number of images);

reduction means for reducing the amount of information of the extracted image (paragraphs 0107-0108 teaches wherein a thumbnail is generated from a top picture);  
encoding means for encoding the image whose amount of information is reduced by a predetermined encoding scheme (as discussed above, a thumbnail by definition is a reduced size image version generated by encoding a larger size image);

association means for associating the encoded image with the unit from which the image is extracted by the extraction means (paragraphs 0108, 0110 and 0111 teaches of associating each thumbnail with an entry point); and

recording control means for controlling recording of the image associated with the unit onto a data recording medium for recording the moving image (paragraph 0110 teaches of recording the thumbnail management information onto the recording medium where the moving images are recorded).

wherein the recording control means: controls recording of the moving image onto the data recording medium such that the moving image in a predetermined time for

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playback is recorded in a first contiguous area of the data recording medium

(paragraphs 0053-0055 and Fig. 4 shows that the AV file is recorded together).

However, Gunji et al. fails to particularly teach the claimed wherein the recording control means controls recording of the encoded image onto the data recording medium such that the encoded image is recorded in a second contiguous area of the data recording medium when the amount of data of the encoded image exceeds a predetermined threshold if the recording of the moving image in the first area of the data recording medium is ended.

In an analogous art, Nakajima et al. teaches the claimed in paragraphs 39 and 40 wherein, after the moving image portion of the data is recorded to the HDD 109 (synonymous to the AV file recording in Gunji et al.), only when there exists thumbnail image data consisting of more than 0 image data (meets claimed threshold), is the thumbnail image data written to the HDD 109.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ability to record the encoded image data (thumbnail image data) into a second contiguous area when there exists more than 0 frames of thumbnail image data as taught by Nakajima et al. into the system of Gunji et al. so that thumbnails image data can be stored separately to provide a direct means of accessing the data during future reproduction/manipulation.

**Regarding claim 2**, Gunji et al. teaches the claimed wherein the association means is a track associated with a track of the moving image and associates the encoded image with the unit by arranging the encoded image in a track in a

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predetermined file format (as discussed above wherein each thumbnail is associated with an entry point, which links it to UD\_PGC (playlist) in Fig. 2).

**Regarding claim 3**, Gunji et al. teaches the claimed wherein the association means associates the encoded image with the unit by associating a range of time for playback of the unit of the moving image with the encoded image (as discussed above wherein each thumbnail is associated with an entry point, which links it to UD\_PGC (playlist) in Fig. 2).

**Regarding claim 5**, Gunji et al. teaches the claimed wherein the encoding means encodes the image by a compression and encoding scheme for a static image (as discussed above, only a single image from the top of the recording is used to create a thumbnail).

**Regarding claim 6**, Gunji et al. teaches the claimed wherein the encoding means encodes the image by a compression and encoding scheme for a moving image such that decoding is possible only with the image (as discussed above and upon reproduction of the thumbnail (as in paragraphs 0111) the thumbnail is decoded by system decoder group 64 in Fig. 1).

**Regarding claim 7**, Gunji et al. teaches the claimed wherein the reduction means reduces the amount of information of the image by thinning out pixels of the image (as discussed above, a thumbnail by definition is a reduced size image generated by encoding a larger size image. The encoding process removes majority of the data from the larger image to create the smaller thumbnail sized image).

**Playback apparatus, method, medium and program claims 12, 16-18** are rejected for the same reasons as discussed above in the method apparatus claims 1, 9-11, respectively.

**Regarding claim 13**, Gunji et al.'s system utilize a conventional DVD format and therefore would allow for skipping functions between chapters and therefore would reproduce only the associated thumbnails.

**Claims 14 and 15** are rejected for the same reasons as discussed above in claims 5 and 6, respectively.

7. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Gunji et al. (US 2002/0126994) in view of Nakajima (US 2003/0228133) and further in view of Lopresti (US 6,298,173).

**Regarding claim 8**, the proposed combination of Gunji et al. and Nakajima et al. teaches the claimed wherein the reduction means reduces the amount of information of the image however fails to teach wherein the reduction is accomplished by removing a high-frequency component of the image.

In an analogous image reducing art, Lopresti teaches in col. 7, lines 3-8 of the ability to use JPEG to remove high frequency components of an image to reduce the amount of information.

Gunji's thumbnail generation is implemented on an I frame, which uses MPEG compression. It should be noted that an I frame alone uses the same technology as JPEG compression.



It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the ability to use JPEG compression as taught by Lopresti into the proposed combined system of Gunji et al. and Nakajima et al. so that image compression can be achieved.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GELEK TOPGYAL whose telephone number is (571)272-8891. The examiner can normally be reached on 8:30am -5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gelek Topgyal/  
Examiner, Art Unit 2621

/Thai Tran/  
Supervisory Patent Examiner, Art Unit 2621